

Appl. No. 09/766,910
Amdt. dated December 22, 2003
Reply to Office Action of September 23, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (Original) Cancel.

2 (Presently Amended). The system of claim 4 17 wherein said controller is adapted to advance said piston after said ~~container~~ reservoir has a predetermined amount of fluid to purge air.

3 (Presently Amended). The system of claim 4 17 wherein said delivery system includes a tube extending from said reservoir further comprising a valve coupled to said tube and arranged to allow fluid to be ejected from the ~~syringe~~ reservoir in a first position, and fluid to flow into the ~~syringe~~ reservoir from the fluid source on a second position.

4 (Presently Amended). The system of claim 4 17 wherein said ~~container~~ reservoir is a syringe.

5 (Presently Amended). The system of claim 4 17 wherein said controller defines an aspiration mode during which said piston is at least partially retrieved to cause fluid to flow toward said piston.

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6 (Presently Amended). The system of claim 5 further comprising a selector controlled by an operator to indicate a desired mode of operation, wherein said controller selects said aspiration mode and said charging mode in response to a position of said selector.

7 (Original). The system of claim 6 wherein said selector is adapted to indicate an aspiration operation, and wherein said controller is adapted to move said piston back by a predetermined distance, stop said piston and then move said piston forward again, thereby causing fluid to flow back from the patient and then forward into the patient.

8 (Original). The system of claim 7 wherein during said aspiration operation, wherein said controller is adapted to move said piston to the position at which the aspiration operation has started.

9 (Presently Amended). The system of claim 5 wherein said controller is adapted to select the aspiration mode at the end of an injection, wherein during said aspiration mode said piston is moved back by said controller by a sufficient amount to retrieve fluid from said ~~syringe~~ reservoir.

Claims 10-16. Cancel.

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17 (New). An electronic device for selectively injecting or withdrawing fluid from a patient's body comprising:

a reservoir for injecting or collecting said fluid;

a source of therapeutic fluid;

a fluid delivery system having a first end coupled to said reservoir and a second end adapted to be inserted into the patient's body;

an electrical drive mechanism with a piston movable within said reservoir, said electrical drive mechanism selectively operating in one of a charging mode and an injection mode in response to commands;

a controller adapted to generate commands for said drive mechanism;

wherein said pump in said charging mode is advanced to an empty position and then the piston is retrieved to a full position with the reservoir connected to the source of therapeutic fluid thereby causing said therapeutic fluid to fill said container.

18 (New). A method automatically charging an injection device having a reservoir, a pump reciprocating in the reservoir and driven by a drive mechanism, a delivery system extending away from the reservoir, and a controller operating in one of a charging mode and an injection mode in response to commands and a selector for selecting the mode of operation, the method comprising:

selecting with said selector said charging mode;

issuing a first command by said controller to said drive mechanism;

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in response to said first command advancing said piston to an empty position;
issuing a second command by said controller; and
in response to said second command retrieving said piston to a full position while
said reservoir is connected to said therapeutic fluid source to thereby cause said
therapeutic fluid source to fill said reservoir.

19 (New). The method of claim 18 wherein said injection device includes a valve
connected to said therapeutic fluid source and a tube connecting said valve to said
reservoir, further comprising positioning said valve to a first position in which said
therapeutic valve is drawn by said piston into said reservoir and positioning said valve
to said second position in which fluid from the reservoir can be expressed to the patient.